WHAT IS CLAIMED IS:

1. A method of treating hot spent cooking liquor, having a first pressure and a first temperature, from a cellulose pulp digester, using a flash tank having a high-pressure liquid inlet, a low-pressure liquid outlet, and a steam outlet; and an ejector, having a high-pressure gas inlet, a low-pressure gas inlet, and a gas discharge; to recover energy from the liquor, said method comprising:

(a) introducing the hot spent cooking liquor into the high-pressure liquid inlet of the flash tank;

(b) exposing the liquor in the flash tank to a second pressure, lower than the first pressure, so that at least some of the liquor evaporates to form steam and a cooler liquid at about the second pressure and at about a second temperature;

(c) removing at least some of the steam from the flash tank in a first gaseous stream;

(d) introducing the first gaseous stream to the low-pressure inlet of the ejector;

(e) introducing a second gaseous stream having a third pressure, greater than the second pressure, to the high pressure inlet of the ejector; and

(f) discharging a third gaseous stream at a fourth pressure, higher than the second pressure, from the discharge outlet of the ejector; and

wherein (a)-(f) are practiced so that the second pressure in the flash tank is lower than the pressure that would be present in the flash tank without the utilization of the ejector under otherwise substantially identical conditions.

2. A method as recited in claim 1 wherein (a)-(f) are practiced so that the second pressure and temperature are lower than the pressure and temperature that would be present in the flash tank without the utilization of the ejector under otherwise substantially identical conditions.

3. A method as recited in claim 1 wherein (a)-(f) are practiced so that the second pressure is at least about .1 bar lower than would be present in the flash tank without the utilization of the ejector under otherwise substantially identical conditions.

4. A method as recited in claim 1 wherein the hot spent cooking liquor introduced in (a) is from a kraft pulping process.

5. A method as recited in claim 4 wherein (a) is practiced to introduce extraction liquor from the kraft pulping process having a temperature of between about 140°-160°C, and a pressure between about 6-16 bar absolute.

6. A method as recited in claim 5 further comprising, prior to (a), (g) cooling the hot spent cooking liquor to a third temperature lower than the first temperature by at least about 5°C.

7. A method as recited in claim 6 wherein (g) is practiced by passing the extraction liquor from the kraft pulping process into indirect heat exchange relationship with a kraft cooking chemical.

8. A method as recited in claim 1 further comprising, prior to (a), (g) cooling the hot spent cooking liquor to a third temperature lower than the first temperature by at least about 5°C.

9. A method as recited in claim 1 wherein (e) is practiced utilizing steam having a pressure between about 4.5-5.5 bar absolute, and a temperature between about 140°-160°C.

10. A method as recited in claim 1 wherein (a)-(f) are practiced so that the volume of the first gaseous stream is at least about 10% greater than would be discharged as steam from the flash tank without the utilization of the ejector under otherwise substantially identical conditions.

11. A method as recited in claim 10 further comprising (h) discharging concentrated hot spent cooking liquor from the flash tank at a temperature at least 2°C lower than would be present without the utilization of the ejector under otherwise substantially identical conditions.

12. A method as recited in claim 1 wherein the flash tank comprises an intermediate or last flash tank, and further comprising a first flash tank; and wherein (a) is practiced to introduce the hot spent cooking liquor into the high pressure inlet of the first flash tank prior to (a), and to pass the liquid discharged from the first flash tank into the high pressure liquid inlet of the intermediate or last flash tank.

13. A method of treating a first gaseous stream having a first pressure in a pulp mill to produce a second gaseous stream at a second pressure, higher than the first pressure, using a jet ejector having a high-pressure inlet, a low-pressure inlet, and a discharge outlet, said method comprising:

(a) introducing the first gaseous stream in the pulp mill having a first pressure to the high-pressure inlet of the jet ejector;

(b) introducing a second gaseous stream in the pulp mill to the low-pressure inlet of the jet ejector; and

(c) discharging a mixture of the two gaseous streams to form a third gaseous stream which is discharged from the discharge outlet at a third pressure, greater than the second pressure.

14. A method as recited in claim 13 wherein (a) is practiced using high pressure steam having a pressure greater than about 5 bar gage, and wherein (b) is practiced using the low-pressure steam having a pressure of about 3.5-4.5 bar gage.

15. A method as recited in claim 13 further comprising (d) monitoring the third pressure, and controlling the first pressure in response to the monitoring of the third pressure.

16. A system for treating hot spent cooking chemical to recover energy comprising:

at least one flash tank having a hot liquid inlet operatively connected to the source of hot spent cooking liquor, a cooled liquid outlet, and a steam outlet;

at least one jet ejector having a high-pressure inlet, a low-pressure inlet operatively connected to said steam outlet of said flash tank, and a discharge for mixed steam;

a source of pressurized fluid operatively connected to said high-pressure inlet of said jet ejector; and

means for using the mixed steam discharged from said jet ejector operatively connected to said discharge of said jet ejector.

17. A system as recited in claim 16 wherein said at least one flash tank comprises a first flash tank, and a second flash tank, said second flash tank operatively connected to said jet ejector; and wherein said first flash tank has a cooled liquid outlet operatively connected to said hot liquid inlet of said second flash tank.

18. A system as recited in claim 16 wherein said at least one flash tank comprises a first flash tank, a second flash tank, and a third flash tank, and wherein said at least one jet ejector comprises a first jet ejector; and wherein said first flash tank has a cooled liquid outlet operatively connected to the hot liquid inlet of said second flash tank, and wherein said second flash tank has a cooled liquid outlet operatively connected to said hot liquid inlet of said third flash tank, and wherein said third flash tank is operatively connected to said first jet ejector.

19. A system as recited in claim 18 wherein said at least one ejector comprises first and second ejectors, and wherein said third flash tank is operatively connected to said first jet ejector, and said second flash tank is operatively connected to said second jet ejector.

20. A system as recited in claim 16 further comprising a heat exchanger operatively connected between said source of hot spent cooking liquor and said flash tank hot liquid inlet so as to cool the hot spent cooking liquor before introduction into said hot liquid inlet.

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